[For methods of arriving at census data and detailed diaries kept by the census parties, see category 116, pp. 2-25, 69-95.]

Mr Subramanian of the Forest Department and Mr Majid's young son also accompanied us. We reached Bumila Creek on the north eastern coast of the Little Andaman at about 3 P.M. and having sighted an Andamanese hut we decided to anchor the launch there. The beach was about 2 miles from the place of anchorage. We took out a small boat and rowed to the beach and reached the hut at about 4 P.M. It was found to be abandoned but there were signs of human occupation and within a few yards a water-hole was discovered. A broken canoe, with a single out-rigger was found close to the hut (*see* Plate I, Fig. 1). Burnt coal and smouldering ashes in the centre of the hut showed that it was probably deserted by the Aborigines as soon as they had sighted us. After making a careful inspection of the place we returned to our launch and decided to anchor there for the night. Unfortunately the choppy sea and the strong current coming from the Bumila Creek tossed our small boat throughout the whole night, as a result of which all of us had an uncomfortable time.

We left southwards towards Hut Bay early in the morning and as we moved along the coast we sighted another Onge hut. This did not seem to be deserted as we saw a few people moving about. We decided to stop there and investigate. We took out a boat and moved towards the coast with such presents as we had brought from Port Blair on the advice of the Chief Commissioner. When we got near the coast, we left the boat and walked for about a furlong through coral beds finally reaching the shore. The hut was found to be circular in shape and not too large, and was occupied by 2 adult females, 1 adult male and a young boy. The adult male, *Ukla*, was the father of the young boy and husband of the younger woman. The older woman was his mother-in-law. These people appeared very friendly. We gave them presents we had brought and took photographs and made drawings of their hut. In addition, full anthropometric measurements were taken by me and blood was taken from fingers for typing by Mr Sarkar. Ukla was able to speak a few Hindi words and we gathered that he had been to Port Blair and knew Mr Bonington, formerly of the Forest Department, Andaman Islands. We found in front of the hut, hanging from a large tree the skull and mandible of a Dugong (*see* Plate I, Figs. 3 & 4). We enquired about its significance from Ukla, but unfortunately his knowledge of Hindi was not sufficient to explain it to us. We learned from him, however, that the name of the village was *Laito*. After making friendly gestures, we returned to 'Molly' and proceeded immediately towards Hut Bay. At about noon time while we were having our lunch, we suddenly saw three outrigger canoes (of single outrigger type) coming towards us, each carrying about 4 Onges. We signalled to them and they came to our launch and tied their canoes with it and came on board. The men appeared to be friendly and not afraid of us. Our greatest difficulty, however, was language, as we could not make ourselves understood as none of the crew or any other member including Mr Subramaniam of the Forest Department knew that language. There was one man who seemed to occupy a position of authority among these men, and was painted with red and yellow ochre on the forehead, arms and breast. The

crew of the ship called him 'Raja' and we adopted this name (*see* Plate IV, Figs. 1 & 2). He was the only one among the Onges who was fully armed with knives, bows and arrows. Among the contents of the canoes, we found complete fishing out-fits, bows and arrows, ropes and nautilous shells, for bailing out water. There was also a kind of bamboo float about 1½ ft. long, probably used for turtle fishing. We gave them food, cigarettes and other presents. After they became quite familiar with us and friendly, they were subjected to full anthropometric measurements by me. Their blood was also tapped by Mr Sarkar for typing. The presents given were iron nails, strips of red cloth, tea and tobacco leaves. Among all these objects what they liked most were the tobacco leaves. Cooked rice, dal (cooked lentils) and fish curry served to them from the launch Mess were however not much appreciated. With the few Hindi words that they were able to understand, we told them that we would like to visit their camp next morning and meet other members of the party. After the canoes had left, we anchored at this point for the night and after taking an early breakfast we left for the shore in two batches. We were informed by the crew that the creek near the Onge camp was called the *Dugong Creek*. We had to wade through brakish water and coast fringing with coral beds for about two miles, before we reached the Onge settlement. There was one large circular communal hut characteristic of the Onges and several lean-to's (*see* Plate I, Fig. 2). We noticed three canoes on the beach apparently those with which they came to meet us on the previous day. We saw also several small dogs and the entrails of a pig strewn round. We met all the 12 Onges we saw the day before, along with Ukla and his family. In addition there were a number of women and children. We took out our presents of dried tobacco leaves, iron nails and two large fishes that we had caught on our way from Port Blair. These were distributed to the Onges. There were altogether 17 men, 15 women, 4 boys and 3 girls. The children were between 1½ to 4 years. The entire party of Onges behaved towards us in a friendly manner and subjected to our measurements and tapping of blood from their fingers without any protest. We went inside their hut and inspected the settlement very thoroughly. A large number of photographs were taken. We found that the name of this village was *Tambebui*. As it became rather late, we decided to return to 'Molly' in the Andamanese canoes, rather than walk through the coral beds for 2 miles. The Onges understood our signs and gladly escorted us back to the launch. We found there were several other Onges waiting for us in the launch who came from the neighbouring village *Gabilong*. All of these Onges appear to be under the influence of the man nick-named as 'Raja' (*see* Plate IV, Figs. 1-2).

We could not proceed towards Hut Bay as the launch had to return for duty at Port Blair, where we reached at about mid-night.

After reaching Port Blair, I discussed the matter of transport with the Chief Commissioner, Mr Majid. A thorough coastal survey of Little Andaman would take at least 15 to 20 days. As it was found impossible to get either from the Forest Department or from the Harbour Master any of their launches

for such a fairly long period, it was decided to give up the idea of continuing our survey of the Little Andaman that year.

At the suggestion of Mr Majid it was finally decided instead to pay a visit to the surviving members of the Friendly Andamanese tribes at Neil and Havelock Islands where they had now been transferred and settled. Unfortunately, as it was March and the closing month of the financial year, I had to return to my headquarters at Banaras and leave Mr Sarkar in charge of the party to carry on further surveys in the North and Middle Andamans as far as this was found possible.

Accordingly Mr Sarkar with his party left Port Blair on 6-3-48 on the Forest Motor Launch "Lindsay" and arrived at Long Island at about 8 A.M. on the following day. Mr Sarkar was met by Mr Joseph, T. S. D. O. who brought "Loka" and his party of four Andamanese. They were studied by him. The party left Long Island on the Forest Launch "Kokhari" at about 7-30 A.M. on the following day. Mr Joseph accompanied the party, who halted at the Guitar Island where some of Loka's associates were hunting turtles with harpoons. After leaving Guitar Island, the launch passed through Homfray Strait. Mr Joseph showed the spot where the Jarawas in 1925 attacked his camp. This is near the place from where the Jarawas usually crossed from the Baratang Island to the Middle Andamans. Proceeding further westwards, Mr Sarkar and his party reached the north-east end of the Spike Island. This is another route of migration of the Jarawas from the South to North Andamans. Usually they come from the South Andaman and cross over to Bluff Island and then reach the Spike Island opposite to it. Loka gave the information that it was about this place that several Jarawas were shot sometime back and their bodies were buried in the Bluff Island. The party went along the coast of Neil Island and anchored off Foul Bay. Human footprints identified by Mr Joseph and Loka as belonging to the Jarawas were found in the sand. Following the footprints the party found the remnants of burnt ashes and cinder in a spot in the jungle. There were also vessels made of leaves for carrying water which were still wet. These were collected as specimens of Jarawa objects for the Department's collections. No traces of Jarawas themselves could however be found who must have moved into the jungles just prior to our party's visit. Our men then crossed over to Bluff Island and searched for the Jarawa skeletons, but none were found. On the 9th of March the "Kokhari" returned to Long Island, where it anchored. Loka brought his party of 21 individuals who were now settled in Neil Island. These people were carefully studied by Mr Sarkar and notes taken regarding their geneology, family structure and physical state, etc. On the 9th the Deputy Chief Commissioner, Mr S. C. Gupta with his wife arrived at Long Island. Mr Sarkar and his party accompanied him to Stewart Sound in his boat "Elsa". Unfortunately the few Andamanese who were living there happened to have gone out in their canoes for fishing and could not be contacted (*see* Plate I, Fig. 5).

They then went with Mr Gupta to the Karen village called *Webi* situated at a short distance from Stewart Sound. There were no Andamanese there,

6: Cipriani E-5 (1951-1953)1961 AZ2 Andamans AZ2
Onge

torches for hunting by night. There were pigs everywhere. In half an hour we often got six or more of them. At Chemalê, far from the coast, we had eleven in a few minutes for distribution to everybody, including roaming Onge. Pigeons and ducks also were often plentiful. The simple pleasures of hunting incited everyone to a spontaneous daily struggle through the dense forest ; and so, every month, I managed to carry out many times the work I could have done had I not kept all the men glad to follow me. On seven different occasions I spent 162 days in Little Andaman, out of a total of 634 days altogether in the Andamanese Archipelago – all of them given up to Onge research. These trips are recorded in Port Blair Government offices. A few details on the subject are published in the "Bulletin of the Department of Anthropology", Government of India, starting in Vol. II, No. 1, 1953 (issued in 1956) and extended to other issues. Such papers were hurriedly prepared by me while I was halting in Calcutta on my way from the Andamans to Europe. Press proofs could never be submitted to me; there are, consequently, many misprints, particularly in the figures relating to my Onge Census. The misprints are so obvious that they could only influence a most biased critic : to be discussed in future papers and while my Onge book is in preparation. In Port Blair (South Andaman) I started an Onge Museum with material collected by me. I had the honour of inaugurating it on 6 July, 1953 in the presence of the Chief Commissioner for Andamans and Nicobars, Mr. A. K. Ghosh, one of the kindest and most intelligent Indian gentlemen that it was my pleasure to meet in Asia. On 9 March, 1954 Dr. RAJENDRA PRASAD, President of the Republic of India, also visited the Museum. On that occasion I introduced to him 30 of my Onge friends (wives, husbands and children) in their most natural attire. The President questioned me at length on Onge anthropology and ethnology with the pertinence of a specialist.

While in Little Andaman I tried to study all possible aspects of Onge life. I also tried to count the natives : a very difficult task for they are a nomadic people, ready to vanish into the jungle at any moment. Often I was surrounded by them without seeing a single one. In the darkness of their jungle, the small, black, naked Onge easily disappear. They see us but we do not see them. They can only be counted in their sleeping quarters in communal huts ; even so, results are misleading. I found a number of communal huts in the interior regions of Little Andaman, whereas previously they were said to exist only on the coast. The larger, more solidly built huts are in the forest. With the help of my Indian assistants I obtained plans and photographs of all the huts that I saw. Unfortunately the number of Onge communal huts is rapidly diminishing – a very significant fact. Many are in ruins, many more completely destroyed. Only kitchen-middens and occasional clusters of planted bamboo indicate their former location. Through an interpreter, and with two Onge speaking a little Hindi, I was able to gather information on these and other matters. Direct observation, however, proved the best way of gaining knowledge. In some places there was nothing to help me, and I was compelled to guess about communal huts whose inmates chose to hide in the jungle. Of the many personal names that I collected I must say that they are reliable only for a short period : the Onge like to change their names from time to time. All this, in addition to the Onge's nomadic way of life, causes great confusion and makes a proper Census almost impossible. Frequent changing of names also hinders the establishment of genealogies. Furthermore, the Onge custom of adopting children shifts many of them from one family to another, and adoptive parents invariably claim them as their own offspring. The parents themselves, who are ignorant of numbers, not infrequently forget how many children they have, who these children are and where they are located. It was almost useless to follow previous information concerning communal huts ; and so I decided to consider mainly the situation existing at the time of my visits. The result of my Census may be imperfect, but before criticizing it it would be advisable to know the conditions that prevail in anthropological work among the Onge. Something more than merely counting people, anyhow, was achieved by me in Little Andaman.

In this short paper I am pleased to present a peculiar aspect of Onge life, an aspect that these innocent and once hostile people did not attempt to hide from me, though they also told me nothing about it. Only direct observation could help, and it involved pro-

9:Sarkar / D-5 (1948) 1962 AZ2 Andamans AZ2
Jarawa

Another item of material culture found during the above expedition was a few unbaked pots which show that the Jarawa manufacture earthenware articles – an art not reported so far from among the Onge. Coiled pottery was known among the Andamanese (MAN, 1932). It can be found in the Andamanese kitchen middens as well.

The present writer had the opportunity of being twice after the trail of the South Andaman Jarawa in the year 1948. During these two tours a large number of ethnographic objects of the Jarawa was collected. They are now deposited at the office of the Anthropological Survey of India [1], Indian Museum, Calcutta.

It was known that the Jarawa were using Bluff and Spike Islands as temporary halting stations in their to-and-fro migrations from South Andaman to Middle Andaman. In September 1938, a pregnant Jarawa woman and four young children (SARKAR, 1952) were captured while they were crossing on a raft on the coast off Bluff Island. A few of their haunts were known to the then officers of the local forest department.

In 1948 while the present writer was camping at Long Island, studying the Andamanese, two such opportunities of visiting the Jarawa areas arose. The presence of the Jarawa north of Port Anson was reported to us. We left for Port Anson in a motor launch on March 7th 1948, in the company of an Andamanese – whose canoe was tied behind our launch – under the leadership, of Mr. Joseph, the then Sub-divisional Officer of the forest department. We had one gun only and a *dao* (billhook) each.

Fig. 2

We passed through Homfray Strait and, reaching Port Anson, we went along the western coast of Middle Andaman. We then anchored our vessel off Foul Bay and came ashore in the Andamanese canoe. This flat open coast is known to be a good place for deer hunting and the animals could be seen from the sea. When the deer were not seen from the canoe we presumed that some human beings had been there shortly before; we suspected them to be Jarawa. Soon we discovered on the beach small footprints, which both Mr. JOSEPH and the Andamanese recognized as Jarawa ones. We traced them inside the jungle and came across a small fire which was still smouldering. A few yards away we found two bags for carrying water made of leaves (fig. 2) which were still wet. The few drops therein tasted sweet. We walked about for some time since the footprints could no longer be traced. There seemed to have been only two people. We then came to Bluff Island along the east coast of Spike Island but found nothing of the Jarawa.

[1] Thanks are due to its Director, Professor NIRMAL KUMAR BOSE for his kindness in helping the writer with the illustrations of this paper.

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

151 regular exercise of the two faculties required by their existence in direct contact with the natural world; anyone, it is said, who lived such a life would preserve the same keenness of eye and ear. [164] Certainly I saw no myopia among the Onges, nor any of the eye infections common among other inhabitants of the tropics. With the naked eye they can pick out tiny craft far out to sea, or the small, narrow Onge canoes which I could hardly see with field-glasses, which makes me doubt whether constant exercise of the eyes can really be the full explanation of their power of vision. They can pick out quickly and accurately birds immobile among the dense leaves in the darkest part of the forest, invisible to me, even though I was used to looking for them and could see them when they moved. And from the ground they saw high in the trees tiny amphibia which I wanted to catch, after I had caught one by chance which had proved to be a new species. These amphibia, [126] perfect mimics, become almost invisible when they attach themselves to the bark of the trees, but the Onges pointed them out to me from a distance with absolute accuracy, and I was in fact able in 1954 to catch over two hundred in a week.[1]

825 151 114 The Onges can also pick out reptiles on the ground, or among the foliage, distinguishing with long practice the poisonous varieties which abound in the islands, and I found it very useful to send Onges ahead of me in the forest to look out for these snakes. When any of my Indians were bitten it was always because they thought they could do as well as the local scouts! The Onges themselves are, however, occasionally bitten, with serious consequences. One of them, aged twenty-five, climbed into a very high tree after honey, and unwittingly put his left hand on a snake hidden in the leaves, where it had climbed to search for birds' eggs. It bit just above the elbow, causing an alarming swelling of the arm with severe pain and fever. He was brought to me semi-conscious, with the whole limb swollen to the size of a rugby ball. The unfortunate [752] man's neck had been bound with the usual strands of *Ficus* bark, and not surprisingly he was groaning desperately, and clearly on the point of death.

752 123 The Onges have no specific remedies for snake bites, and their

[136] [1] These amphibia were examined in 1954 at the Institute of Zoology of the University of Genoa and given the name of *Kaloula baleata ghoshi*, in honour of Mr A. K. Ghosh, then Governor of the Andamans.

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

allowing the smoke to escape and letting more air in – a very welcome relief at times, even for the Onges!

I made sketch plans of all the huts I visited, with positions of the supporting poles, beds, etc. Two typical ones were those at Toqué-è-bùie and Tambe-e-buiè. In March 1952 the former had some parts of the roof missing, as the inhabitants had taken the mats off to make temporary shelters in the forest; when the rains came they brought them back and replaced them. This custom explained why, on Great Andaman, some obviously temporary shelters had roofs far too well made to be intended for purely temporary use.

Entering the hut at Toqué-è-bùie, by the entrance proper, one finds oneself facing an area with no beds in it. In the centre of this area, under the apex of the roof, is a fire, a little larger than those kept burning beside each bed. This is used for communal cooking during the rainy season; at other times all cooking is done in the open. The ground area covered by the roof was 9·12 square metres, its height at the centre 3·3 metres, and the external circumference 30·65 metres. Beyond this stretched the ring of refuse built up by each short period of occupation.

Unlike many of the huts of Little Andaman, Toqué-è-bùie has a central pole, not thick, but of a very hard wood. In a circle round this are ten upright poles, each about two metres from the central pole. Starting on the left of the entrance and moving clockwise their heights vary slightly.[1] Outside this inner circle of supporting poles are two more concentric rings of uprights, the first, with a radius of 3·65 metres from the central pole, consists of twenty uprights with an average height of 1·35 metres, and the second, with a radius of 4·53 metres from the centre pole, has an average height of 0·38 metres. In nearly every hut each circle of uprights is attached to the roof by a ring formed by a bundle of long canes, to which each upright is lashed. Another bunch of long canes runs transversely from the entrance to the opposite side of the hut, almost touching the ground at the two ends, touching the roof in the middle, and fixed to the rings of canes to which the uprights are attached.

The bundle of canes forming this arch support is clearly set in place after the erection of the first (innermost) ring of uprights, and actually lies on top of the ring of canes to which they are

[1] 2·45, 2·35, 2·32, 2·3, 2·45, 2·33, 2·3, 2·35, 2·32, 2·33 metres.

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

beasts were plentiful, and used to come right up to the camp out of curiosity, in spite of the noise of the shooting, and my men took so many that they were able to dry and smoke some for future use. There were flocks of pigeons after the fruit in the *Ficus* trees, and another rather smaller bird with green wings (*ariel* in Hindi). There were always large fish lying quietly on the surface of the sea, only two hundred metres from the dig, so that we could shoot these as well. The Jarawas were kept at bay, we all fed very well, and everyone was highly satisfied!

The camp was surrounded night and day by a chorus of frogs, and the lights of the camp attracted a whole army of hermit crabs; in the dry season they made an incredible noise parading up and down the dry leaves, even rummaging round our beds inside the tents while we were trying to get to sleep. They disappeared, suddenly and completely, immediately the rains came. Like the rest of their species they use their claws to close the shells in which they have made their home. Usually the large claw was able to do the job alone, but in case of difficulty they would bring the other claw and even their legs into the battle, until they managed to close the shell completely (my men enjoyed these struggles immensely). They in fact use various shells, and squeeze into them somehow, even into the cowries. Some varieties use nothing but cowries and their claws and legs have become very slender in adapting themselves to the narrow shell.

Unlike the hermit crabs, the rats were not affected by the seasons and came after our stores in hordes. I collected a number of species, but I was never able to catch one kind which particularly interested me. It was a jumping variety, graceful and rather larger than our mouse, with big ears, and a very pointed muzzle. The front feet were short, almost atrophied, and the back ones long, with strong, powerfully muscled haunches, so that the creature was rather like the rats of the pyramids in miniature. I often surprised them round my tent if I shone a torch suddenly, but they would bound away out of reach on their hind legs and no traps seemed to attract them. This variety does not seem to have been reported, at least in the Andamans, and it was the only one I was never able to catch.

When the rains came the disappearance of the hermit crabs was matched by the equally sudden appearance of curious cicadas, which chirped intermittently like all those in the Andamans. By the

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

position by reed cords, which were to be tied in front of the snout, ending in a cord by which the skull was to be hung above the hunter's bed. No sooner said than done, and at the beginning of 1914 all the old trophies were thrown out into the forest, to be gradually replaced by the new ones. Fortunately I had collected some of the old trophies before the 'revelation'!

From the evidence of the middens it would appear that these variations in burial customs have no practical basis, and probably all derive from similar 'revelations'. Further investigations in a large series of the deposits, enabling dated comparisons to be made, would be extremely revealing.

Even allowing for these sudden alterations in established customs, it is clear that their elaboration indicates slow and hardly perceptible development over long periods of time and the middens must be dated in millennia. The hypothesis put forward by some scholars that the Andamanese are descended from negro slaves who escaped while on their way to the Portuguese colonies in India in the sixteenth or, at the earliest, fifteenth centuries, seems therefore quite untenable, in face of the abundant evidence in favour of the great antiquity of the middens and of the people who built them up.

It seems clear that during the last few thousand years, successive waves of migration have taken place over a whole area bounded on the west by the Andamans and Nicobars. All indications point to a close connection between the Andamanese and the peoples to the westward, the Negrito element remaining alone and almost untouched in the Andamans, but becoming submerged in the Nicobars into the mongoloid element of more recent origin. Even today a number of Nicobarese show signs of Negrito ancestry; short in stature, they have crinkly hair which although long is very different from the straight black hair of the mongoloid element, and their heads, noses and lips bear clear signs of Negrito ancestry.

In addition to these more general conclusions the middens also cast some light on the origin, still somewhat problematical, of the wretched Jarawas of Great Andaman. Comparisons between their middens and those of the Onges show that there were in the past communal huts on Great Andaman exactly the same as those still extant today on Little Andaman.

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

been cooked in the same way; the bones are never charred, but always have the appearance of being cooked in an earth oven. The direct roasting of large game over the fire, postulated by some authorities, including Brown, was never practised; the islanders preferred to go on as they had done since time immemorial, because it was more efficient – witness the traces of the earth oven which are to be found all over the world, including Europe. In Polynesia and Micronesia, and among the pygmies of Asia and Africa, it was widely used; variations when they arose did so as the result of local circumstances, like that of throwing water on the fire instead of using fleshy leaves, when there were none in the area. But the basic principle remained the same everywhere, and the use of the earth oven coincides with the geographical distribution of hunting, gathering and burial customs similar to those found in the Andamans.

In April 1954 I excavated the midden at Tambe-e-buiè on Little Andaman, abandoned after the earth tremors of 1951, to investigate the position of the beds. The custom of burying the dead underneath their beds made it possible to trace the latter by the human remains below them, arranged in a circle round the periphery. The Onges themselves helped in the work, sometimes even trying to recognize the remains as they came to light.[1] There were clear signs of reburial. The body is buried immediately after death at least one metre deep; whereas after exhumation, cleaning and colouring, it is never re-interred more than thirty centimetres below the floor of the hut. When another death makes it necessary for a new grave to be dug under the bed, the piles of bones from the second are disturbed, so that in time a form of ossuary develops. In this it is not possible to identify the various remains of individuals unless some change in the position of the hut, even by a few metres, preserves the bones from disturbance by fresh graves. Traces of the graves always remain, however, as they are invariably filled with fresh earth.

We have already seen that on Little Andaman the introduction of the dog reduced the consumption of shellfish (and hence the rate

[1] The material recovered is now in the Anthropological Museum of the Andamans and Nicobars, which I helped to establish at Port Blair. The museum was inaugurated on 6 June 1955 in the presence of the Governor, Mr A. K. Ghosh and the chief Indian officials of the town.

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

Even the unique dances enjoyed by the Onges are to be seen among the Jarawas, with the characteristic marking of the rhythm by slapping the calves against the buttocks. This does not seem to have been a feature of the Arioto dances, in which the rhythm was by the *pukuta yemnga*, a kind of convex shield made of the very hard and aromatic red wood (*Pterocarpus dalbergoides*) which the termites never seem to attack. I was able to obtain one of these shields, the last that the twenty-three surviving Arioto possessed and the only musical instrument in the islands. It is played by one man with his feet, while the dancers, male and female, form lines on each side of him a short distance away. Before use the convex face is decorated with lines of white ochre and chains of tusk shells are hung from a hole at the end opposite to the one on which the player's feet beat; from the same hole runs a cord, which he holds in his hand to prevent the instrument moving away from him as he beats. The players change from time to time as the dancers shuffle on and on for hours in the light of the resin torches. But apart from the instrument itself, the rhythmic hand-clapping and the dancers singing in unison are the same throughout the Andamans.

The women clap their hands in rhythm, and then slap one thigh with the open palm of one hand, the other hand clasping the wrist, singing all the time. The men dance in Indian file, beating the ground first with the right heel, then with the left, the toes barely raised from the ground, moving a short way forward each time. As they dance they lean forward, then with hands clasped and their fingers interlaced. There are variations, but the basic step is always the same.

One difference between the Onges and the Jarawas is that in the latter both sexes are naked, while the Onge women have in recent times adopted the *naqaineghe* or apron. Complete nudity was a characteristic of all the Negritos, including the Semang and Aetà, and the Jarawa migrations probably took place before the introduction of the *naqaineghe*.

The present inability of the three peoples to understand each other is more a question of pronunciation than of difference in actual words. To examine the question fully it would be necessary to collect a large number of words and analyse their affinity; meanwhile we know that despite their inability to understand each other there is a close resemblance between the language of the Jarawas and Sentinellese and that of the Onges. Strict isolation can lead to

11: Cipriani E-3 (1951-1955) 1966' AZ2 Andamans AZ2

comparatively rapid variation and it is now difficult to establish their linguistic connections outside the Andamans, but Africa can certainly be discounted, in view of the general weight of evidence against any Negro ancestry.

Like the Onges the Jarawas are divided into endogamous groups, each with its own name, corresponding to their communal huts, and each with their own territory for the purposes of hunting, fishing and gathering food. There is little reliable information about their daily life or even their numbers; it is, however, certain and I cannot overstress this, that the Jarawas are Negrito in type,[1] with the same admixture as in the Onges.

Whoever or whatever they may be, the replacement of primitive expeditions by genuine attempts at pacification would, quite apart from the obvious humanitarian considerations involved, afford a unique opportunity for detailed study of a dying population in regeneration, and the refusal of an otherwise irrevocable progress towards final extinction.

But the problem of the Jarawas is merely one aspect of the problem of the Andamanese in general, and their connection with the Negritos both past and present. The Semang and the Aetà, as we have seen, resemble each other, and together resemble the Andamanese, in a number of essential points. Recent contacts with other influences in Malacca and the Philippines respectively have produced variations – such as the Semang use of traps and snares with which they take small animals, and also birds, which the Andamanese never touch. They have also taken to making refuges in the trees as a defence against wild animals, non-existent in the Andamans. Traps, poison, agriculture, fish-hooks, animal nets, are all late acquisitions, not found among the original Negritos. It was thought by Brown that spears, used by the Semang, were also unknown among the peoples of the Andamans, but I have myself seen them used by the Onges, though admittedly I saw only a few, and very rough specimens; I did, however, manage to bring some back with me.

In the case of the canoes, the Semang and the Aetà seem to have

[1] On 11 January 1931 a Jarawa was killed at Lekeralarta on Middle Andaman and the head is now in the Indian Museum in Calcutta. This head shows signs of beard, unlike those of two Jarawas held in the Nicobars since the September 1931 incident. Short, muscularly well-developed, strong and very black, Jarawas are normally beardless, as is usual in Negritos.

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sweet, and delicately flower-scented. No one waited for the climber to reach the ground. With my men and the Onges the party numbered twenty-two in all, every one of them hungry. The log was thirty centimetres across, and besides the combs there was a good four inches of honey in the bottom, but even so I only managed to set aside two litres for the man who did all the work, before the combs had all disappeared and the remaining liquid as well. The whole lot was gone in a matter of minutes.

What puzzled me was how the bees were quietened. I knew from personal observation that both the varieties of bee on Little Andaman could and did sting badly, and I knew that the Onges I had watched had done nothing deliberately to avoid stings.

In Man, the olfactory sense can detect minute amounts of iodoform, for example, but we are completely insensitive to other substances strongly repellent to flies, mosquitoes and other insects. Some similar mechanism must also operate in the case of bees. The Onges cannot understand anything of this, but they must possess some age-old, almost intuitive and innate knowledge, which they apply unconsciously. At some time someone must have found that the juice of a certain plant they call *tonjoghe*, apparently inodorous, has the power of deterring bees, and this knowledge, handed down from generation to generation, is applied with delightful simplicity.

In the forests of Little Andaman there are bushes of *tonjoghe* everywhere, and the Onge who is to go after the honey simply grabs a handful of the leaves and stuffs them into his mouth. With some vigorous chewing they are quickly reduced to a greenish pulp, which is smeared all over the body, particularly the hair. Another huge mouthful chewed on the way up and spat at the bees to make quite sure that they will be deterred even to the point of failing to attack the unsmeared bystanders. I have myself tried the leaves, and like the Onges found them quite tasteless and odourless. The Onges say that the 'magic' was revealed by a seer, and it is a curious fact that of all the luxuriant vegetation on the island only this one plant is effective.

I am unfortunately not in a position to say definitely to what species *tonjoghe* belongs. I took some plants to Port Blair, where they were planted in the Governor's garden; unfortunately before they could flower the then Governor left, and a new gardener

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thought they were weeds and pulled them up. I never managed to see the plant in flower in the wild state, as this occurs at the height of the rainy season, and as no final definition is possible in the absence of the flower it remains unidentified.

The Onges take full advantage of the plant's properties as a bee-deterrent and in mid-March they eat honey, paint themselves, and dance, twenty-four hours a day. During these orgies I have seen a group of about sixty Onges demolish in a few days ten pigs and a dozen large, wooden vessels full of honey, with basket after basket of fish, caught every night by the women, who were apparently not in the least tired by the long daily treks into the forest after the honey. I can never look back on the Onges without a feeling of profound respect for their powers of digestion!

Yet another source of food for the islanders is the cicada. On Little Andaman there are a few species a little larger than the European variety and others rather smaller. The Onges collect the pupae as they emerge from the ground, usually in the mornings, and roast them as a great treat. They are actually very clean insects, which develop slowly under the earth over a period of years sucking lymph from the roots of the trees. When they emerge from the ground the pupae become leathery, but this presents no problem to the indomitable teeth of the Onges. Inside the cicada chrysalids are a mass of delicate tissues, so white and clean that one can understand the Onges' predilection for them.

On Little Andaman the cicadas chirp intermittently, with long silences; most of the day one hears nothing of them and when they suddenly start up the Onges fall absolutely quiet, terrified of frightening them away and losing their chrysalids.[1] In a few moments the whole forest suddenly echoes with a chorus of cicadas, as they all start up as one and then, a minute later, fall silent. Their intermittent chirping is not confined to the Andamans; it is a feature of several species throughout southern Asia. At Golpahar when I was in the middle of the forest excavating kitchen-middens I heard cicadas start up every day at 6.30 p.m., and then stop until the following day. In the mountains of South India, on the slopes

[1] The Onges do not seem to share the superstitions reported by Man and Brown among the Arioto, who appear to believe in fantastic connections between cicadas, the sun, and storms.

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intermittent. The constant flights of the males into the treetops made me think that the females were up there, but I was unable to confirm this. The fireflies will always remain for me one of the most attractive things about the forests of the Andamans. 136

One could write whole books about all the insects and their nightly concerts. On the *Ficus* of Little Andaman live the caterpillars of a very beautiful moth *Antherea paphia*, one of the Saturnidae; these are the silkworms which produce Tasar (or tussore) silk. On these trees they spin their silky cocoons, stronger than those of our European silkworms. Unlike the European *Saturnia pyri*, which leaves the plant before it goes into its cocoon, the Andaman variety remains on it. To avoid falling to the ground, the caterpillars always chew the leaves without weakening the edge to which they are clinging; one false nibble and they would plunge to the ground. As they enter the cocoon stage they take even greater precautions, crawling back to where the leaves join the stem and spinning a ring of silk in the joint. Then they run a thread down the dorsal vein of a leaf and attach the cocoon to it, so that even if the leaf is blown off by the gales the cocoon remains attached to the twig by its thread.

As the *Ficus* sheds its leaves in stages, and is therefore never entirely without leaves, the caterpillars appear twice a year, once in spring and once in the autumn. The butterflies from the first brood appear in mid-September and those from the second in mid-February, the only difference between the two broods, being the duration of the cocoon stage.

When it emerges from its cocoon the butterfly takes a few steps to the nearest support, where it spreads its wings to dry off. Then it sleeps for two days, waking in the night of the second day. As it sleeps the antennae, wire-like in the female, thicker in the male, lie flat against the head behind the eyes, becoming erect only as the butterfly wakes. The females are quiet and show no sign of flight, although they have large wings. The males, however, are restless, and keep circling, mating on their first flight. The females are usually fertilized and die as soon as they have laid their eggs on the plant where they were born. Virgin females which I kept in a case attracted males from many kilometres away, as with our *Saturnia pyri*. The males know unhesitatingly which are the virgin females, although it is not known how they do so. [126]

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136 For the greater part of the year crickets and frogs fill the nights with wave after wave of placid, homely sound, tenor and baritone in full and solemn chorus. Within one area of a few kilometres there are more crickets than the entire human population of the world. Only the males chirp; the females are silent. The song may be for the purpose of attracting the females, but I rather doubt this, for they sing not only before, but also during and after mating. Alone or in chorus crickets will always sing, right up to the moment of death.

The general rule in all the various species of cricket which I have collected in various parts of the world is that only the males chirp. Very rarely both males and females sing; in other rare cases, neither sex sings. However great the physical variations between the species, their mating habits vary very little.

In the Andamans, however, the noise even of the crickets is drowned by the amphibia, particularly the green frogs. Like the crickets, they never sing alone, but always in chorus, led by those with the loudest voice. At fairly regular intervals a few odd frogs will start up; sometimes the chorus is lost, but only for a short while, and then it returns in full force, drowning the individual singers. Is this their collective homage to the fair sex, the females choosing the champions who lead the choir? I do not myself consider this a satisfactory explanation; in the Andamans at least the females normally behave as though the singing does not exist, even while the males work themselves up into a frenzy of croaking.

126 136 I managed to collect fairly large numbers of all these vocal creatures, particularly the insects, for the Institute of Zoology of the University of Naples, and it appears that all are known species common in the neighbouring islands and land masses. Insects are easily spread by the wind over considerable areas if they are caught up in an air current while in flight; I remember one October in the Gulf of Guinea, over three hundred miles from the nearest land, I caught considerable numbers of large insects, blown towards the ship by the wind and attracted by the lights. Borne by the monsoon winds, the insects of southern Asia and Indonesia must have drifted across to the Andamans long ago and flourished in the lush forests.

136 Needless to say, the abundance of insect life on the Andamans makes the archipelago a birds' paradise. Like the insects on which they live their song echoes through the forests day and night, to

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the background rhythm of the woodpeckers tapping on the trunks. 136
I knew that they did this when seeking food, but it was the Onges, natural observers of wild life, who convinced me that the tapping could sometimes be unconnected with foraging. Wherever I camped there were always large trees nearby and with the aid of field glasses it was a simple matter to keep an eye on the woodpeckers, which varied in size from some smaller than our sparrows to others, brilliantly coloured and bigger than pigeons.

One persistent tapper on Little Andaman is a beautiful black woodpecker with a bright red tuft on its head, *Dryocopus martius*, also found in Asia and parts of Europe. I captured some that were [126] thirty-five centimetres long, bigger than any of the other local species. Another, equally common, was slightly smaller than our blackbird and a glorious chestnut colour all over. A little black and white one was even more numerous. I often saw a variety of *Dendrocopus major*, with black and white body, red tuft on the head and a striking crimson feather under the tail. Others were mainly green, always with the red tuft on the head.

All of them hammer on the tree-trunks with their beaks and it is not fully understood why they do so. Tapping in search of insects can be heard the year round and the sound is similar to that made when the nest is being hollowed out. The other form of tapping, true drumming in the musical sense of the word, is only heard in the mating season and is infinitely louder. The Onges connect this [825] sound with reproduction, although they have not grasped the connection between mating and birth. It can be heard over three hundred metres away, while the tapping for food or nest-building carries only for a short distance.

When the bird is breaking through the bark in search of food or hollowing out the nest, the beak usually strikes the trunk at an angle and at irregular intervals. The bird throws its whole strength into each blow, lifting its head right back every time to strike even harder with the next blow. The blows are usually struck first from the right, three or four in quick succession, and then three or four from the left, to dislodge a chip of bark or wood. When the woodpecker nears the larva he is after, still hidden under the bark, the blows may become perpendicular. In nest-building a hollow is cut out of wood, often seven or eight centimetres deep in the case of the larger species, and large enough in diameter to admit the bird. Then

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climb up the roof of the cave, but they do. I collected a number, all *Trimesurus viridis*, and now in the Institute of Zoology of the University of Genoa. I had to pull them off the roof by the tail, as they were stuck fast on the rough surface of the rock. The snakes devour both eggs and young of the swallows, but the parents invariably return to the right nest, even if the contents are gone. When disturbed the salangana, tiny insect-eating birds with very long wings, fly in a tight flock towards the mouth of the cave, where they can be easily knocked down or trapped.

Below the nests there is always a thick layer of guano, crawling with insects and built up over the centuries by generations of birds using the same nesting places. The nests, about five to six centimetres in diameter and very small inside, normally contain one egg, rarely two or three. When we detached the nests from the roof, the young, instead of trying to escape, clung fast to the nest with their claws, cowering in the bottom and staring at us.

To several nests with only one egg, I added another. When I returned a few days later I found the interloper being happily cared for by the foster parents, showing that as is usually the case the parent birds recognize only the nest and accept the contents of it without question. Outside the nest, however, they fail to recognize even their own offspring, and in carnivorous species may even eat them. The young of the salangana are tended by the parent birds for only a few days after hatching, and as soon as they begin to move about outside the nest all recognition is permanently lost.

It is somewhat surprising that the bird populations of the Andamans differ considerably from island to island. The establishment of such marked, almost specific differences as are now apparent between birds clearly originally of the same species must have taken a very long time indeed and can only be explained if one assumes – justifiably, from my observations – that many species roam less widely than one would expect. The pigeon of Little Andaman (*umugbi* to the Onges) is surprisingly sedentary, so that varieties in the various islands have developed as isolates and differ considerably. That of South Andaman, for example, is smaller than that found on Little Andaman, while those of Car Nicobar are larger still. And in a particular area fifteen kilometres west of Port Blair I repeatedly caught pigeons which were absolutely emaciated with their intestines loaded with tapeworms, whereas outside this

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I examined a number of canoes drawn up on the beach. They varied in size from some eight to ten metres long, built to carry twenty people, to small single-manned craft three to four metres long, and there were some very small ones clearly intended to encourage the children to set out on their own. The very large canoes are, however, rare. The beam also varied considerably from some barely wide enough to admit a man's knees to others of one and a half metres or more.[1]

In the shallows, contrary to some assertions, paddles are never used; the booms would make alternate paddling extremely difficult. Reversed harpoon shafts are instead used as punt poles and oars, usually made of *Myristica longifolia*, are used only in deep water. They are sometimes but not always lashed into the holes in the gunwale through which the booms pass. They are short, not more than 1·3 metres long and are always rowed forwards (obviously there would be a danger of stubbing a reef if the European style of rowing was used). Like the canoes, the oars vary somewhat in size. Very roughly made they consist of a handle ninety centimetres long and a forty-centimetre blade. The grip tapers almost to a point and increases gradually in diameter towards the blade, which is long, narrow, blunt-ended and flat-convex in section. Usually it is merely roughly shaped with the Onges' crude hatchet, but occasionally it is smoothed off with a sharp *Cyrena* shell. The helmsman and pilot stand on the two platforms, guiding the canoe with oars. As far as possible the rowers avoid the side bearing the outrigger mechanism; any deviation of course caused by the unilateral rowing is corrected by the two steersmen.

When they first launch a canoe the Onges decorate it with ochre designs like those on their bodies and the hollowed logs used to hold honey, although they are washed off as soon as the craft enters the water. As usual the men do all the work up to that point and the women do the painting. The initial painting is the only form of ornament on the canoes; there is not even a mark of ownership, although each canoe is curiously enough recognized as the property of one man, despite the fact that everyone has helped to

[1] I am unable to agree with Brown that the Onge canoes are extremely small, that they have bow and stern, and that their floats are inefficient. My own experiences of travelling in the canoes has led me to the opinion that on these and other points Brown was wrong, possibly partly because he never actually visited Little Andaman.

build it (when I wanted to acquire two for the new anthropological museum at Port Blair and the Indian Museum in Calcutta I had to bargain with the men recognized as the owners, although the price had to be distributed among all the members of the group).

The chief delight of the men on their fishing trips is the capture of a Giant Turtle. I have already described (p. 88) the spear harpoons which the Onges use to catch them. Once caught, the wretched animals are subjected to a form of vivisection utterly incomprehensible to the Western mind; they are literally cut up alive and the pieces thrown into the boiling cooking-pot. Nor have I ever witnessed anything so terrible as the way in which the Onges, in the absence of any suitable cooking vessel, or the materials for an earth oven, roast these turtles whole and alive over a slow fire. They seem totally unable to realize that animals can feel pain and laugh like children at the other atrocious tortures they unwittingly inflict not only on the turtles, but on every living thing that falls into their hands.

These marine turtles (as far as I was able to see there were no land turtles in the Andamans) yield a far greater amount of food than the dugong, and provide the islanders with both meat and eggs. Two species are common in the seas round the islands, *Chelonia virgata*, or the green turtle, and *Caretta imbricata*, which supplies the shells normally sold commercially. The Onges prefer the former, which are both meaty and more plentiful.

Turtle-hunting and egg-collecting is done by the menfolk. The method is very like that used for dugong and large fish, using the harpoon. Owing to their fear of the spirits abroad in the night, the Onges never go near the beaches between dusk and dawn, when it would be easy to take the turtles on land and immobilize them by turning them on their backs. They do know this trick, however, and use it when captured turtles (often weighing up to a hundredweight) are too heavy to carry in the canoe; the animals are turned on their backs and dumped on the beach ready to pick up later.

The Onges harpoon the turtles from canoes, preferably at night when the turtles are nearing the shore, which they never approach in the day time. When there is a moon the creatures are easily seen, and on dark nights the phosphorescence of the sea helps.

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These crabs are enormous, weighing one and a half kilograms, and are very tasty. Like many land crabs they have one large claw and a smaller one, the difference being quite marked in the males, though hardly noticeable in females. Some appear left-handed, some right-handed; I confirmed this by looking at thousands of them with the help of my Indians, and sent some to the Institute of Zoology at the University of Genoa for further examination.

On the inside of the large claw, to hold the prey while the crab bites, are protuberances that look like teeth. They have a very similar function and are a good example of superficial similarity in different types of organs designed for a similar purpose.

The females, like those of other crabs, carry the mass of round, almost transparent, orange-coloured eggs under the abdomen, attached to her swimmerets and well protected. In the great crabs from which the Onges make their pipes the bluish-green shell is reflected on to the eggs, giving them a beautiful sheen. Immediately the young are hatched, they cling underneath the mother's abdomen like the eggs, so that if a female is caught one can be sure of having the whole brood. Even at this stage the sex and the disparity of the claws is discernible as the young are exact replicas of the adults. Two curious things about them are that the number of the two sexes in any brood are exactly equal, and that in the males there are equal numbers right- and left-handed. The point is an interesting one, and I hope geneticists will be able to investigate it further.

Another important feature in Onge life is the *Nautilus*, the cephalopod whose shells provide the only drinking vessels they know. *Nautilus* shells, unlike those of gastropods, are spiral in one plane, with interlocular septa. The mollusc occupies the last, or largest, of the whorls, which communicates with the rest of the spiral by a cylindrical syphuncle running through the mid-line of the shell. This is connected to the creature's viscera by a vascular tube, which for hydrostatic purposes regulates the amount of air and water in the chambers. Each chamber is concave on the side nearest the aperture, and the distance between the septa increases with the size of the whorls, to a fixed maximum, limited by their number, which is constant in adults. *Nautilus*, a living fossil from the time of the ammonites, is the last survivor of a genus dating from the Silurian period; long ago there were many species, although only four have

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rather shorter than in other species, with rows of small teeth covering the palate. The jaws themselves, however, have only one row of teeth, all very pointed. To my intense annoyance, my eel specimens were lost with the silurides.

On rare occasions the Onges manage to catch the toad fish of the mangrove swamps. These curious little animals are apparently a compromise between the fish and the frog; they can breathe both in the air and under water and like to come out of the water to take a walk. They wriggle about in the pools left by the ebb tide, popping out into the air as soon as they meet anything suspicious, and hopping away over quite considerable distances. But normally they wander peacefully about on the mud, propelling themselves with their two pectoral fins, which are attached to the end of a form of arm. In size (never over twenty centimetres long) and colour they remind one of the gudgeon, to which they are related. They belong to the genus *Periophthalmus*, of the order Gobiidi. They seem to prefer living in the open rather than in the water, and appear to look forward to low tide, when the tiny creatures on which they feed are about. Hunger satisfied, they cling to some stone or tree-trunk, often in an almost vertical position, and will stay there over half an hour, particularly if their tail is touching the water, as this keeps their body damp and helps them to breathe by means of ingenious gill sacs filled with air.

Toad fish move into the marshes as the sea recedes and move back as the tide returns. In the middle of the day they seek the shade in the damp crevices of the mangrove swamps. They seem to glory in the first rays of the morning sun, their huge erectile eyes, which never rest, moving endlessly from side to side. Their independent movement enables the creature to gaze at the sun with one eye and look for likely prey with the other. The two eyes, set closely together on top of their flat heads make them look rather ridiculous. Another striking feature about them is a kind of sucker, or adhesive disc, formed by the ventral thoracic fins. These have a loose fold of skin on the back, so that when the fins are brought together in front of the body, the skin falls into a funnel shape, which when pressed against a stone or tree-trunk adheres to it by suction, holding the animal fast.

I was amused by the way toad fish can be domesticated as soon as they are caught. I kept some in my tent, leaving water available

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for them and feeding them on the table. As soon as they saw worms wriggling, they would move cautiously towards them and then snap them up like lightning. They became used to sitting in my hand quite undisturbed, looking round in two directions at once in an interested way. Flies held by the wings fascinated them more than anything, and they used to stare at the insects as though hoping to mesmerize them. They made delightful pets.

More prosaically, they are very good fried. Outside Little Andaman I found hundreds every day near Golpahar on Middle Andaman, and as the fish market in Port Blair was over a day's journey away we used many for non-scientific purposes.

Dugong, monitors, snakes, jungle cats, bats, leeches – all abound in Little Andaman and I had ample opportunities to study them. The dugong are well known to the Onges, but I only saw them at Bumila Creek (Cuateniabo) and Jackson Creek, where I did not have the time to catch any; the Onges tried, but without result.

Dugong (from the Malayan *Dyong*, introduced into scientific Latin as the family Dugongidae), are large mammals of the order *Sirenia*. They have a short fish-like body, with closeable nostrils above a cavernous mouth, which is surrounded by short bristly whiskers and armed with a brush-like, horny plate. In the male two short tusks hang down each side of the mouth, like a miniature hippopotamus, giving the animals a cumbersome, ugly look. The Onges prize the dugong, but rarely manage to capture one; when they do, there is great feasting. I was never able to try it, or even acquire any really close observations of the creatures.

Monitors or dragon-lizards, on the other hand were under my feet every day, although the islanders never eat them. I used to put out as bait fish or pig carcasses rejected by the Onges as being too lean, and we could then shoot as many as we wanted as they rushed to the bait from all sides. I collected their skins for various museums, using the carcasses as further bait.

The Andamanese variety is well known and it closely resembles *Varanus niloticus*, the Nile monitor, to which it is related. The largest can be two metres long, including the long, very tapering tail. As they approach their prey, sniffing at it, their forked tongue, twice the length of the head, flashes in and out of its sheath with incredible speed. Although they have strong legs they move slowly and it is easy to catch them by the tail, providing one takes care to